

# **EXHIBIT A**

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FAIRCHILD SEMICONDUCTOR CORPORATION

UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

ALPHA & OMEGA SEMICONDUCTOR,  
INC., a California corporation; and  
ALPHA & OMEGA SEMICONDUCTOR,  
LTD., a Bermuda corporation,

Plaintiffs and Counterdefendants,

v.

FAIRCHILD SEMICONDUCTOR  
CORP., a Delaware corporation,  
Defendant and Counterclaimant.

AND RELATED COUNTERCLAIMS.

Case No. C 07-2638 JSW  
(Consolidated with Case No. C 07-2664 JSW)

**ANSWER TO COMPLAINT FOR  
PATENT INFRINGEMENT AND  
DECLARATORY JUDGMENT; FIRST  
AMENDED COUNTERCLAIMS FOR  
PATENT INFRINGEMENT AND  
DECLARATORY JUDGMENT**

**JURY TRIAL DEMANDED**

Defendant Fairchild Semiconductor Corporation ("Fairchild"), by and through its attorneys,  
hereby answers the Complaint for Patent Infringement and Declaratory Judgment ("Complaint") of  
plaintiffs Alpha & Omega Semiconductor, Ltd., ("AOS, Ltd.") and Alpha & Omega Semiconductor,  
Inc., ("AOS, Inc.") (collectively, "AOS") as follows:

1 **PARTIES**

2 1. Fairchild is without sufficient knowledge or information to form a belief as to the truth  
3 or falsity of the allegations of paragraph 1 of the Complaint, and denies them on such basis.

4 2. Fairchild is without sufficient knowledge or information to form a belief as to the truth  
5 or falsity of the allegations of paragraph 2 of the Complaint, and denies them on such basis.

6 3. Fairchild admits that it is a Delaware corporation, with a place of business at 82  
7 Running Hill Road, South Portland, ME 04106.

8 **JURISDICTION AND VENUE**

9 4. Fairchild admits that the Complaint purports to assert claims arising under the patent  
10 laws of the United States, 35 U.S.C. §§ 1 *et seq.* and the Declaratory Judgment Act, 28 U.S.C.  
11 §§ 2201 and 2202. Fairchild also admits this Court has subject matter jurisdiction over this action  
12 under 28 U.S.C. §§ Section 1331 and 1338(a). Except as so admitted, Fairchild denies the remaining  
13 allegations of paragraph 4 of the Complaint.

14 5. Fairchild admits that this Court has personal jurisdiction over Fairchild and that it has  
15 facilities located in San Jose, California. Fairchild admits that it has communicated with AOS in  
16 California regarding AOS's business and Fairchild's patents. Except as so admitted, Fairchild denies  
17 the remaining allegations of paragraph 5 of the Complaint.

18 6. Fairchild admits that venue is proper in this judicial district.

19 **INTRADISTRICT ASSIGNMENT**

20 7. Fairchild admits that this action is subject to assignment on a district-wide basis under  
21 the local rules of this Court.

22 **GENERAL ALLEGATIONS**

23 8. Fairchild is without sufficient knowledge or information to form a belief as to the truth  
24 or falsity of the allegations of paragraph 8 of the Complaint, and denies them on such basis.

25 9. Fairchild admits that the face of U.S. Patent No. 5,907,776 ("the '776 patent"), entitled  
26 "Method of Forming a Semiconductor Structure Having Reduced Threshold Voltage and High Punch-  
27 through Tolerance," states that it was issued on May 25, 1999. Fairchild also admits that the face of  
28 U.S. Patent No. 5,767,567 ("the '567 patent"), entitled "Design of Device Layout for Integration with

1 Power MOSFET Packaging to Achieve Better Lead Wire Connections and Lower On Resistance,"  
2 states that it was issued on June 16, 1998. Except as so admitted, Fairchild is without sufficient  
3 knowledge or information to form a belief as to the truth or falsity of the remaining allegations of  
4 paragraph 9 of the Complaint, and denies them on such basis.

5 10. Fairchild is without sufficient knowledge or information to form a belief as to the truth  
6 or falsity of the allegations of paragraph 10 of the Complaint, and denies them on such basis.

7 11. Fairchild admits that it has alleged that AOS infringes U.S. Patent No. 6,429,481 ("the  
8 '481 patent"), entitled "Field Effect Transistor and Method of its Manufacture," and U.S. Patent No.  
9 6,710,406 ("the '406 patent"), entitled "Field Effect Transistor and Method of its Manufacture," and  
10 that these patents issued on August 6, 2002, and March 23, 2004, respectively.

11 12. Fairchild admits that it has directed correspondence to AOS stating that certain AOS  
12 products infringe the '481 and '406 patents and requesting that AOS license rights to those patents.  
13 Fairchild is without sufficient knowledge or information to form a belief as to the truth or falsity of the  
14 remaining allegations of paragraph 12 of the Complaint, and denies them on such basis.

15 13. Fairchild is without sufficient knowledge or information to form a belief as to the truth  
16 or falsity of the allegations of paragraph 13 of the Complaint, and denies them on such basis.

17 14. Fairchild admits that AOS's complaint denies that AOS infringes any valid and  
18 enforceable claim of any of the Fairchild patents, but Fairchild denies the basis for AOS's denial.

19 15. Fairchild admits that an actual and justiciable controversy exists between Fairchild and  
20 AOS concerning whether AOS infringes any valid claim of the '481 and '406 patents and that AOS's  
21 Complaint seeks a declaratory judgment that the claims of the '481 and '406 patents are invalid and  
22 that AOS does not infringe any valid claim of certain of the '481 and '406 patents.

23 **FIRST CLAIM FOR RELIEF**  
24 **(Alleged Infringement of U.S. Patent No. 5,907,776 by Fairchild)**

25 16. Fairchild incorporates herein by reference its responses to paragraphs 1 through 10 of  
26 the Complaint.

27 17. Fairchild denies each and every allegation of paragraph 17 of the Complaint.

28 18. Fairchild denies each and every allegation of paragraph 18 of the Complaint.

19. Fairchild denies each and every allegation of paragraph 19 of the Complaint.

20. Fairchild denies each and every allegation of paragraph 20 of the Complaint.

**SECOND CLAIM FOR RELIEF**  
**(Alleged Infringement of U.S. Patent No. 5,767,567 by Fairchild)**

21. Fairchild incorporates herein by reference its responses to paragraphs 1 through 10 of the Complaint.

22. Fairchild denies each and every allegation of paragraph 22 of the Complaint.

23. Fairchild denies each and every allegation of paragraph 23 of the Complaint.

24. Fairchild denies each and every allegation of paragraph 24 of the Complaint.

25. Fairchild denies each and every allegation of paragraph 25 of the Complaint.

**THIRD CLAIM FOR RELIEF**  
**(Alleged Non-Infringement of U.S. Patent No. 6,429,481)**

26. Fairchild incorporates herein by reference its responses to paragraphs 1 through 15 of the Complaint.

27. Fairchild denies each and every allegation of paragraph 27 of the Complaint.

**FOURTH CLAIM FOR RELIEF**  
**(Alleged Non-Infringement of U.S. Patent No. 6,710,406)**

28. Fairchild incorporates herein by reference its responses to paragraphs 1 through 15 of the Complaint.

29. Fairchild denies each and every allegation of paragraph 29 of the Complaint.

**AFFIRMATIVE DEFENSES**

Fairchild, for its further and separate defenses to the allegations of the Complaint, alleges as follows:

**FIRST AFFIRMATIVE DEFENSE**

1. The Complaint fails to state a claim upon which relief can be granted.

**SECOND AFFIRMATIVE DEFENSE**

2. Each claim of the '776 and the '567 patent is invalid for failure to meet one or more of

1 the conditions of patentability specified in Title 35 of the United States Code, including but not  
2 limited to 35 U.S.C. §§ 102, 103, 112, and/or 115.

3 **THIRD AFFIRMATIVE DEFENSE**

4 3. AOS's claim for relief is barred by the doctrine of prosecution history estoppel.

5 **FOURTH AFFIRMATIVE DEFENSE**

6 4. AOS's claim for damages is barred, in whole or in part, by the operation of applicable  
7 statutes, including 35 U.S.C. § 287.

8 **FIFTH AFFIRMATIVE DEFENSE**

9 5. AOS's claim for relief is barred by the doctrine of equitable estoppel

10 **SIXTH AFFIRMATIVE DEFENSE**

11 6. AOS's claim for relief is barred by the doctrine of laches.

12  
13 **COUNTERCLAIMS FOR DECLARATORY JUDGMENT**

14 **JURISDICTION AND VENUE**

15 1. These counterclaims are brought under the patent laws of the United States, Title 35 of  
16 the United States Code. This Court has subject matter jurisdiction over this action pursuant to 28  
17 U.S.C. §§ 1331 (Federal Question), 1338(a) (Patents), 2201 (Declaratory Relief), and 2202  
18 (Declaratory Relief).

19 2. Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400.

20 3. This court has personal jurisdiction over AOS because AOS has availed itself of the  
21 jurisdiction of the Court by filing its Complaint. AOS also has sufficient minimum contacts with this  
22 State, maintains offices within this State and, on information and belief, conducts substantial business  
23 within this State.

24 **PARTIES**

25 4. Fairchild Semiconductor Corporation is a corporation duly organized and existing  
26 under the laws of the State of Delaware and has a place of business in San Jose, California.

27 5. On information and belief, Alpha and Omega Semiconductor Incorporated is a  
28 corporation organized and existing under the laws of the State of California and has a place of

business in Sunnyvale, California. On information and belief, Alpha and Omega Semiconductor Limited is a Bermuda corporation with a place of business in Taipei, Taiwan.

**FIRST COUNTERCLAIM**  
**(Declaratory Judgment of Non-Infringement)**

6. Fairchild incorporates by reference the allegations of Paragraphs 1 through 5, as if fully set forth herein.

7. AOS purports to be the owner by assignment of the '776 and '567 patents.

8. An actual and justiciable case or controversy exists between Fairchild, on the one hand, and AOS, on the other hand, as to Fairchild's alleged infringement of the '776 and '567 patents by virtue of the allegations in the Complaint in this action.

9. Fairchild has not willfully or otherwise infringed, contributed to the infringement of, or actively induced others to infringe, and does not willfully or otherwise infringe, contribute to the infringement of, or actively induce others to infringe, any valid claim of the '776 and '567 patents.

10. Fairchild seeks a judicial determination from this Court that it has not willfully or otherwise infringed, contributed to the infringement of, or actively induced others to infringe, and does not willfully or otherwise infringe, contribute to the infringement of, or actively induce others to infringe, any valid claim of the '776 and '567 patents.

**SECOND COUNTERCLAIM**  
**(Declaratory Judgment of Invalidity)**

11. Fairchild incorporates by reference the allegations of paragraphs 1 through 9, as if fully set forth herein.

12. An actual and justiciable case or controversy exists between Fairchild, on the one hand, and AOS, on the other hand, as to the validity of the claims of the '776 and '567 patents by virtue of the allegations in the Complaint in this action.

13. Each claim of the '776 and '567 patents is invalid for failure to meet one or more of the conditions of patentability specified in Title 35 of the United States Code, including but not limited to 35 U.S.C. §§ 101, 102, 103, and/or 112.

1 14. Fairchild seeks a judicial determination from this Court that the claims of the '776 and  
2 '567 patents are invalid.

3 **THIRD COUNTERCLAIM**  
4 **(Infringement of U.S. Patent No. 6,429,481)**

5 15. Fairchild incorporates by reference and realleges paragraphs 1 through 5.

6 16. On August 6, 2002, United States Patent No. 6,429,481 ("the '481 patent"), entitled  
7 "Field Effect Transistor and Method of its Manufacture," was duly and legally issued by the United  
8 States Patent and Trademark Office. Fairchild is the assignee of the '481 patent and continues to hold  
9 all rights and interest in the '481 patent. A true and correct copy of the '481 patent is attached hereto  
10 as Exhibit A.

11 17. AOS has directly, indirectly, contributorily, and/or by inducement infringed and  
12 continues to infringe the '481 patent by its manufacture, use, sale, importation, and/or offer for sale of  
13 certain products, including without limitation, AOS power transistors. AOS is liable for its  
14 infringement of the '481 patent pursuant to 35 U.S.C. § 271.

15 18. AOS's acts of infringement have caused damage to Fairchild, and Fairchild is entitled  
16 to recover from AOS the damages sustained as a result of AOS's wrongful acts in an amount subject to  
17 proof at trial. AOS's infringement of Fairchild's exclusive rights under the '481 patent will continue to  
18 cause damage to Fairchild, causing irreparable harm for which there is no adequate remedy at law  
19 unless enjoined by this Court.

20 19. Upon information and belief, AOS's infringement of the '481 patent is willful and  
21 deliberate, entitling Fairchild to increased damages under 35 U.S.C. § 284 and to attorneys' fees and  
22 costs incurred in prosecuting this action under 35 U.S.C. § 285.

23 **FOURTH COUNTERCLAIM**  
24 **(Infringement of U.S. Patent No. 6,710,406)**

25 20. Fairchild incorporates by reference and realleges paragraphs 1 through 5.

26 21. On March 23, 2004, United States Patent No. 6,710,406 ("the '406 patent"), entitled  
27 "Field Effect Transistor and Method of its Manufacture," was duly and legally issued by the United  
28 States Patent and Trademark Office. Fairchild is the assignee of the '406 patent and continues to hold



1 all rights and interest in the '406 patent. A true and correct copy of the '406 patent is attached hereto  
2 as Exhibit B.

3 22. AOS has directly, indirectly, contributorily, and/or by inducement infringed and  
4 continues to infringe the '406 patent by its manufacture, use, sale, importation, and/or offer for sale of  
5 certain products, including without limitation, AOS power transistors. AOS is liable for its  
6 infringement of the '406 patent pursuant to 35 U.S.C. § 271.

7 23. AOS's acts of infringement have caused damage to Fairchild, and Fairchild is entitled  
8 to recover from AOS the damages sustained as a result of AOS's wrongful acts in an amount subject to  
9 proof at trial. AOS's infringement of Fairchild's exclusive rights under the '406 patent will continue to  
10 cause damage to Fairchild, causing irreparable harm for which there is no adequate remedy at law  
11 unless enjoined by this Court.

12 24. Upon information and belief, AOS's infringement of the '406 patent is willful and  
13 deliberate, entitling Fairchild to increased damages under 35 U.S.C. § 284 and to attorneys' fees and  
14 costs incurred in prosecuting this action under 35 U.S.C. § 285.

15 **FIFTH COUNTERCLAIM**  
16 **(Infringement of U.S. Patent No. 6,521,497)**

17 25. Fairchild incorporates by reference and realleges paragraphs 1 through 5.

18 26. On February 18, 2003, United States Patent No. 6,521,497 ("the '497 patent"), entitled  
19 "Method of Manufacturing a Field Effect Transistor," was duly and legally issued by the United States  
20 Patent and Trademark Office. Fairchild is the assignee of the '497 patent and continues to hold all  
21 rights and interest in the '497 patent. A true and correct copy of the '497 patent is attached hereto as  
22 Exhibit C.

23 27. AOS has directly, indirectly, contributorily, and/or by inducement infringed and  
24 continues to infringe the '497 patent by its manufacture, use, sale, importation, and/or offer for sale of  
25 certain products, including without limitation, AOS power transistors. AOS is liable for its  
26 infringement of the '497 patent pursuant to 35 U.S.C. § 271.

27 28. AOS's acts of infringement have caused damage to Fairchild, and Fairchild is entitled  
28 to recover from AOS the damages sustained as a result of AOS's wrongful acts in an amount subject to

1 proof at trial. AOS's infringement of Fairchild's exclusive rights under the '497 patent will continue to  
2 cause damage to Fairchild, causing irreparable harm for which there is no adequate remedy at law  
3 unless enjoined by this Court.

4 29. Upon information and belief, AOS's infringement of the '497 patent is willful and  
5 deliberate, entitling Fairchild to increased damages under 35 U.S.C. § 284 and to attorneys' fees and  
6 costs incurred in prosecuting this action under 35 U.S.C. § 285.

7 **SIXTH COUNTERCLAIM**  
8 **(Infringement of U.S. Patent No. 6,828,195)**

9 30. Fairchild incorporates by reference and realleges paragraphs 1 through 5.

10 31. On December 7, 2004, United States Patent No. 6,828,195 ("the '195 patent"), entitled  
11 "Method of Manufacturing a Trench Transistor Having a Heavy Body Region," was duly and legally  
12 issued by the United States Patent and Trademark Office. Fairchild is the assignee of the '195 patent  
13 and continues to hold all rights and interest in the '195 patent. A true and correct copy of the '195  
14 patent is attached hereto as Exhibit D.

15 32. AOS has directly, indirectly, contributorily, and/or by inducement infringed and  
16 continues to infringe the '195 patent by its manufacture, use, sale, importation, and/or offer for sale of  
17 certain products, including without limitation, AOS power transistors. AOS is liable for its  
18 infringement of the '195 patent pursuant to 35 U.S.C. § 271.

19 33. AOS's acts of infringement have caused damage to Fairchild, and Fairchild is entitled  
20 to recover from AOS the damages sustained as a result of AOS's wrongful acts in an amount subject to  
21 proof at trial. AOS's infringement of Fairchild's exclusive rights under the '195 patent will continue to  
22 cause damage to Fairchild, causing irreparable harm for which there is no adequate remedy at law  
23 unless enjoined by this Court.

24 34. Upon information and belief, AOS's infringement of the '195 patent is willful and  
25 deliberate, entitling Fairchild to increased damages under 35 U.S.C. § 284 and to attorneys' fees and  
26 costs incurred in prosecuting this action under 35 U.S.C. § 285.

**SEVENTH COUNTERCLAIM**  
**(Infringement of U.S. Patent No. 7,148,111)**

35. Fairchild incorporates by reference and realleges paragraphs 1 through 5.

36. On December 12, 2006, United States Patent No. 7,148,111 ("the '111 patent"), entitled "Method of Manufacturing a Trench Transistor Having a Heavy Body Region," was duly and legally issued by the United States Patent and Trademark Office. Fairchild is the assignee of the '111 patent and continues to hold all rights and interest in the '111 patent. A true and correct copy of the '111 patent is attached hereto as Exhibit E.

37. AOS has directly, indirectly, contributorily, and/or by inducement infringed and continues to infringe the '111 patent by its manufacture, use, sale, importation, and/or offer for sale of certain products, including without limitation, AOS power transistors. AOS is liable for its infringement of the '111 patent pursuant to 35 U.S.C. § 271.

38. AOS's acts of infringement have caused damage to Fairchild, and Fairchild is entitled to recover from AOS the damages sustained as a result of AOS's wrongful acts in an amount subject to proof at trial. AOS's infringement of Fairchild's exclusive rights under the '111 patent will continue to cause damage to Fairchild, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

39. Upon information and belief, AOS's infringement of the '111 patent is willful and deliberate, entitling Fairchild to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

**EIGHTH COUNTERCLAIM**  
**(Infringement of U.S. Patent No. 6,818,947)**

40. Fairchild incorporates by reference and realleges paragraphs 1 through 5.

41. On November 16, 2004, United States Patent No. 6,818,947 ("the '947 patent"), entitled "Buried State-Field Termination Structure," was duly and legally issued by the United States Patent and Trademark Office. Fairchild is the assignee of the '947 patent and continues to hold all rights and interest in the '947 patent. A true and correct copy of the '947 patent is attached hereto as Exhibit F.

42. AOS has directly, indirectly, contributorily, and/or by inducement infringed and continues to infringe the '947 patent by its manufacture, use, sale, importation, and/or offer for sale of certain products, including without limitation, AOS power transistors. AOS is liable for its infringement of the '947 patent pursuant to 35 U.S.C. § 271.

43. AOS's acts of infringement have caused damage to Fairchild, and Fairchild is entitled to recover from AOS the damages sustained as a result of AOS's wrongful acts in an amount subject to proof at trial. AOS's infringement of Fairchild's exclusive rights under the '947 patent will continue to cause damage to Fairchild, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

44. Upon information and belief, AOS's infringement of the '947 patent is willful and deliberate, entitling Fairchild to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

#### **PRAYER FOR RELIEF**

WHEREFORE, Fairchild requests entry of judgment in its favor and against AOS as follows:

A. That the claims of AOS alleged in its Complaint be denied in their entirety and that AOS take nothing by way of its Complaint;

B. A declaration that Fairchild has not willfully or otherwise infringed, contributed to the infringement of, or actively induced others to infringe, and does not willfully or otherwise infringe, contribute to the infringement of, or actively induce others to infringe, any valid claim of the '776 and '567 patents;

C. A declaration that the claims of the '776 and '567 patents are invalid;

D. A judgment that AOS has infringed, and is infringing, the '481, '406, '497, '195, '111, and '947 patents;

E. A permanent injunction enjoining AOS and its respective officers, agents, employees, subsidiaries, and those acting in privity or concert with AOS, including related individuals and entities, customers, representatives, dealers, and distributors, from further infringement, contributory infringement and/or inducement of infringement of the '481, '406, '497, '195, '111, and '947 patents;

1 F. An award of damages arising out of AOS's infringement of the '481, '406, '497, '195,  
2 '111, and '947 patents, including enhanced damages pursuant to 35 U.S.C. §284, together with  
3 prejudgment and post-judgment interest, in an amount according to proof;

4 G. A declaration that this case is an exceptional case within the meaning of 35 U.S.C.  
5 § 285 and an award of reasonable attorneys' fees to Fairchild; and

6 H. Costs of suit and such other and further relief as the Court deems just and proper.

7  
8 DATED: September 28, 2007

Respectfully submitted,

9  
10 By: /s/Eric P. Jacobs

Eric P. Jacobs

Peter H. Goldsmith

Robert A. McFarlane

Igor Shoiket

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15 Attorneys for Defendant

16 FAIRCHILD SEMICONDUCTOR CORPORATION  
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**JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Fairchild demands a trial by jury on all issues so triable.

DATED: September 28, 2007

Respectfully submitted,

By: /s/Eric P. Jacobs

Eric P. Jacobs

Peter H. Goldsmith

Robert A. McFarlane

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